



# **371 Waterfront Operations Building**

## **Naval Amphibious Base, Little Creek**

## **Norfolk, Virginia**

**Charette**

**Prepared by:**

**Atlantic Division, Naval Facilities Engineering Command**  
**1510 Gilbert Street**  
**Norfolk, Virginia**

# *Existing Facility*



**Waterfront Operations Building**  
**Naval Amphibious Base Little Creek, Norfolk, Virginia**

# *Existing Facility Panoramic View*

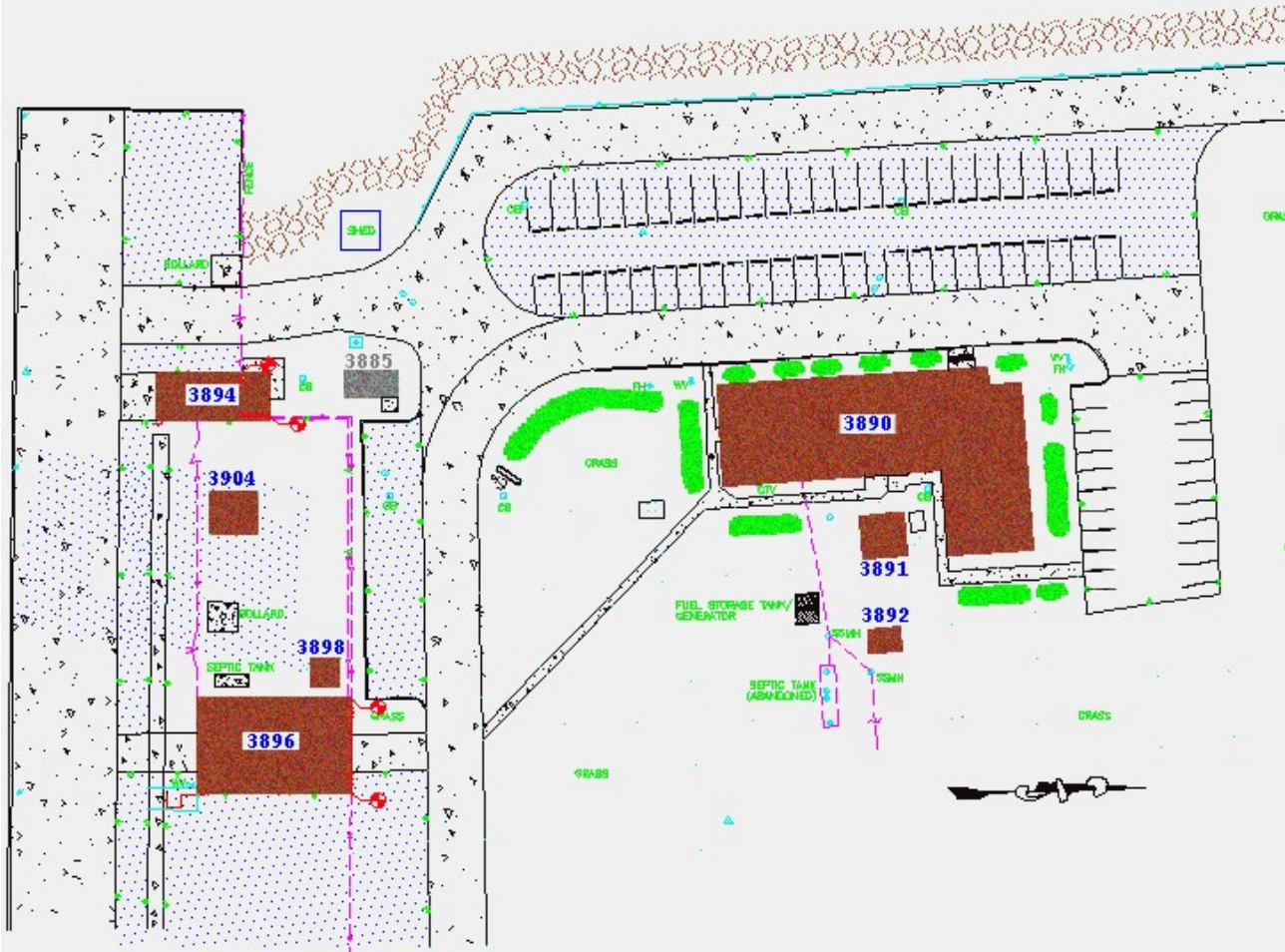


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**Naval Amphibious Base Little Creek, Norfolk, Virginia**





# Existing Facility

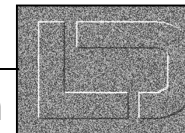


## Demolition Site

- Groundwater Contamination (Metals)
- Demolish to Foundation
- Minimize Land Disturbing Activities
- Utilities Remain Abandoned In-place
- Relocate Fuel Storage Tank & Generator
- Fencing

**Waterfront Operations Building**

**Naval Amphibious Base Little Creek, Norfolk, Virginia**



DESIGNED & ENGINEERED BY:

**LANTDIV**

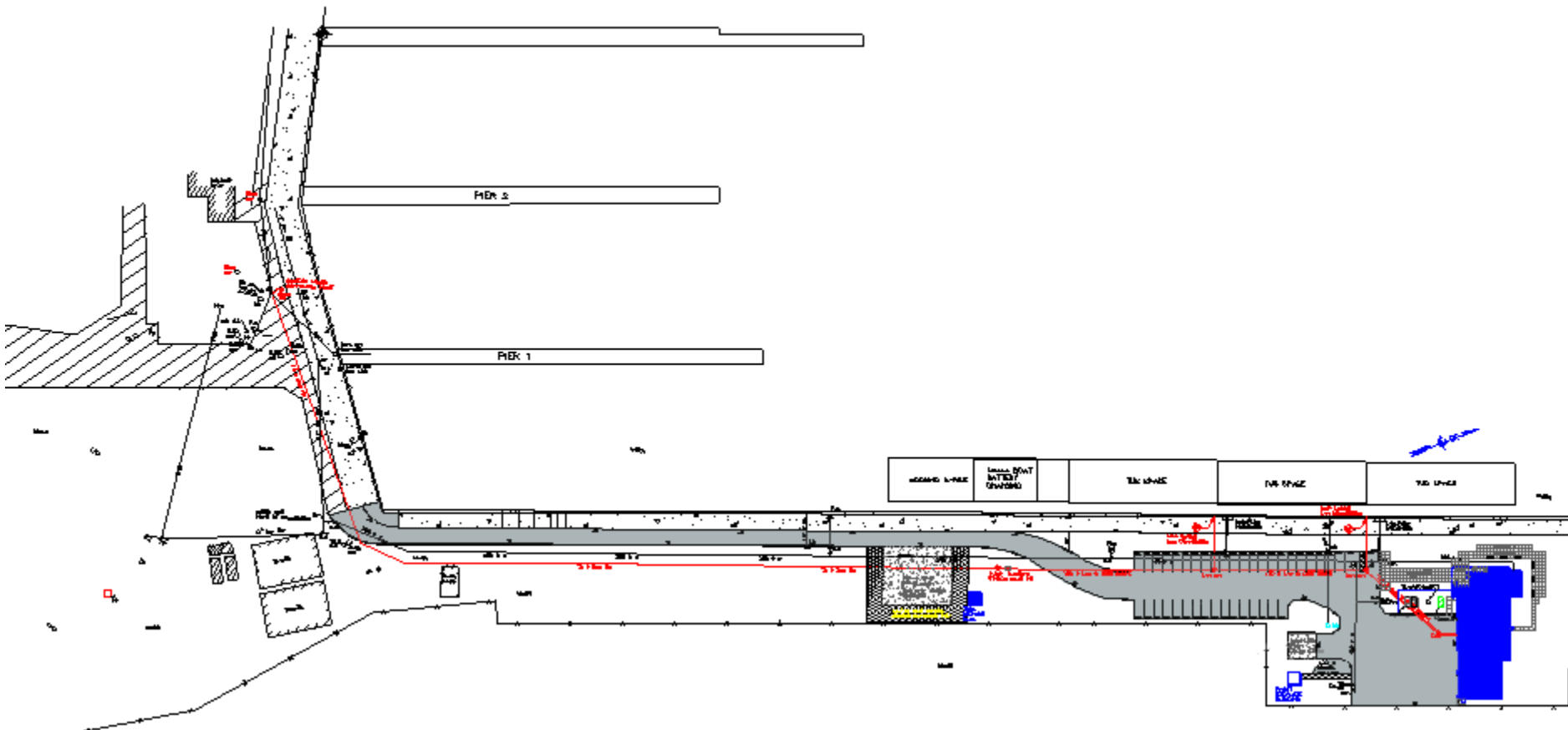
NAVAL FACILITIES ENGINEERING COMMAND

# *New Site Photographs*



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**Naval Amphibious Base Little Creek, Norfolk, Virginia**

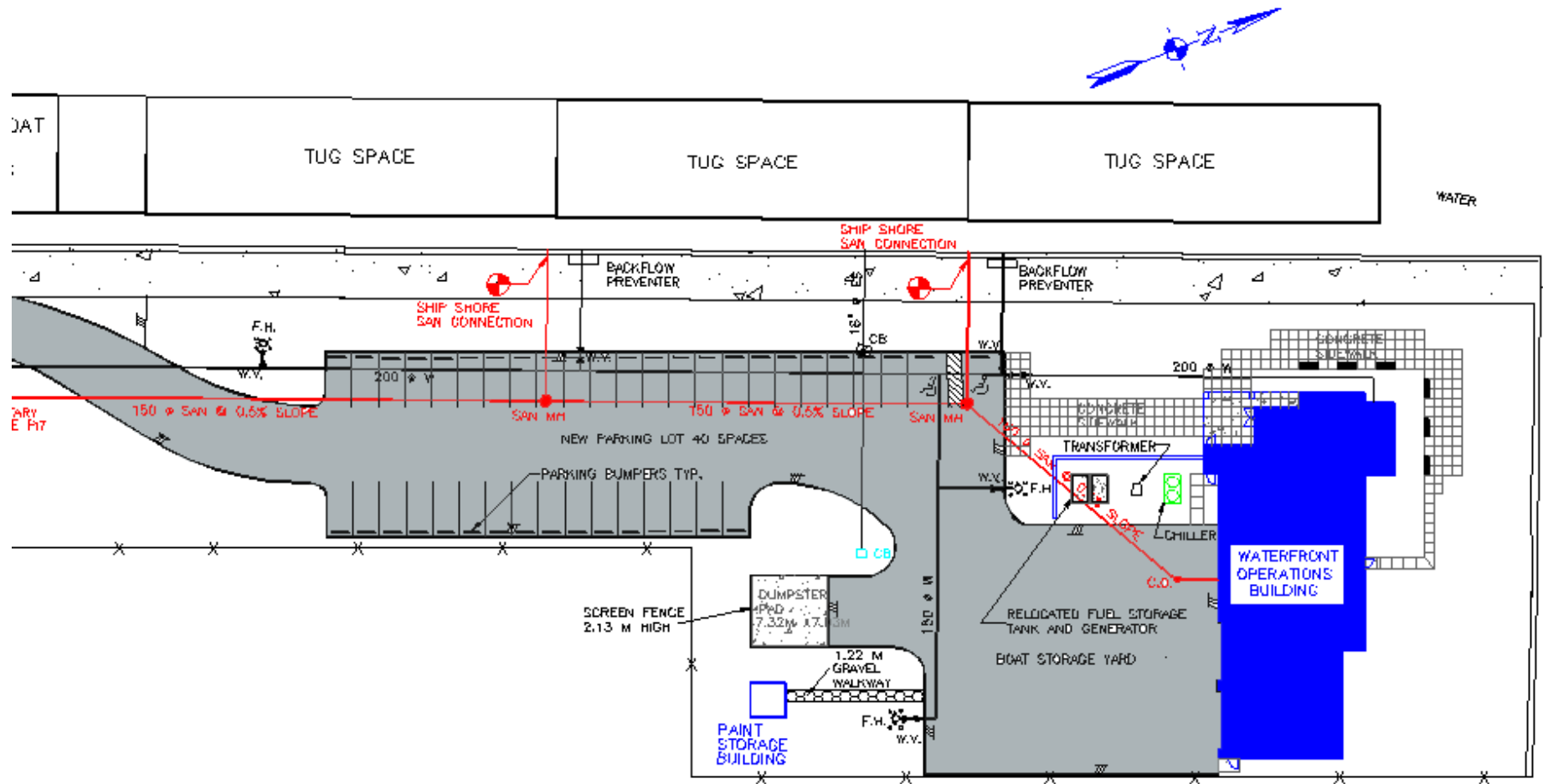
# *New Site Plan*



**Waterfront Operations Building**  
**Naval Amphibious Base Little Creek, Norfolk, Virginia**



# New Site Plan



**Waterfront Operations Building**

**Naval Amphibious Base Little Creek, Norfolk, Virginia**

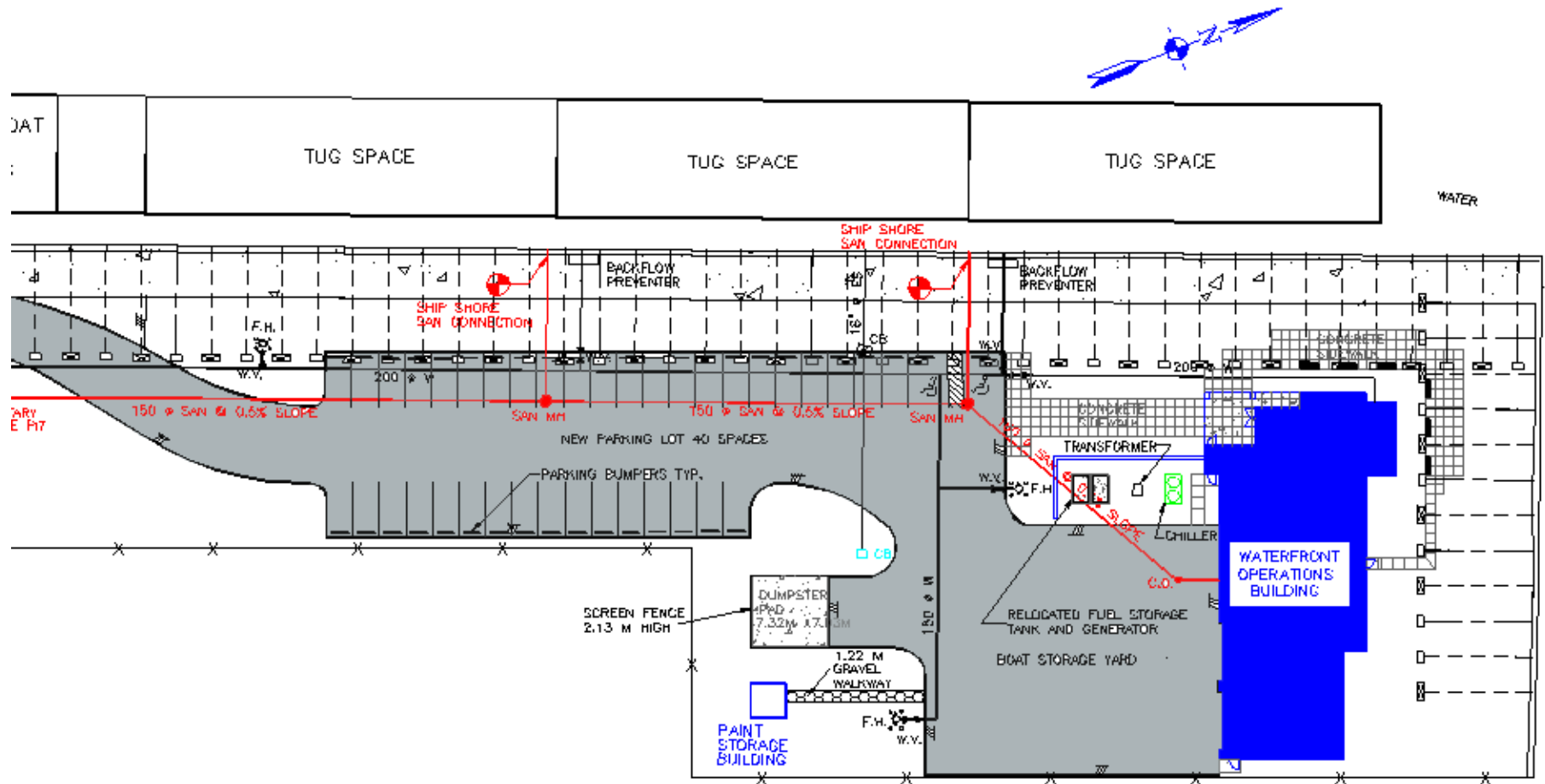


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# New Site Plan



**Waterfront Operations Building**

**Naval Amphibious Base Little Creek, Norfolk, Virginia**





# Landscape Plan

## PLANT KEY



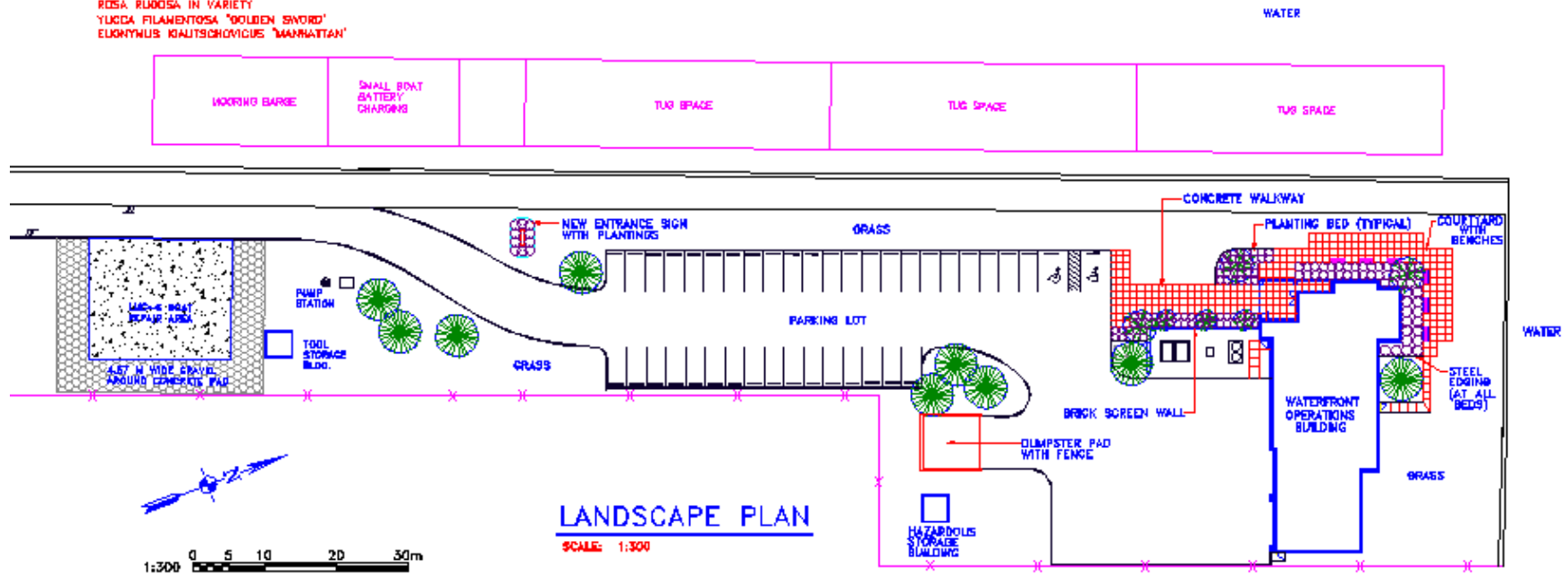
MEDIUM SIZE EVERGREEN/SCREEN TREES  
PINUS THUNBERGIANA



SMALL ORNAMENTAL/SCREEN TREES  
JUNIPERUS CHINENSIS 'TORULOSA'  
ILEX X NELLIE R. STEVENS  
MYRTICA CERIFERA  
LADERSTROEMIA IN VARIETY



SHRUBS/GROUND COVER  
RAPHNOLEPIS INDICA 'SNOW WHITE'  
JUNIPERUS CONFERTA 'BLUE PACIFIC'  
LIGUSTRUM LUCIDUM  
OLEYERA JAPONICA  
ILEX CORNUTA 'CARISSA'  
ILEX VONITORIA 'NANA'  
ROSA RUOSSA IN VARIETY  
YUCCA FILAMENTOSA 'GOLDEN SWORD'  
EUKOMYUS KALITSCHOVICUS 'MANHATTAN'



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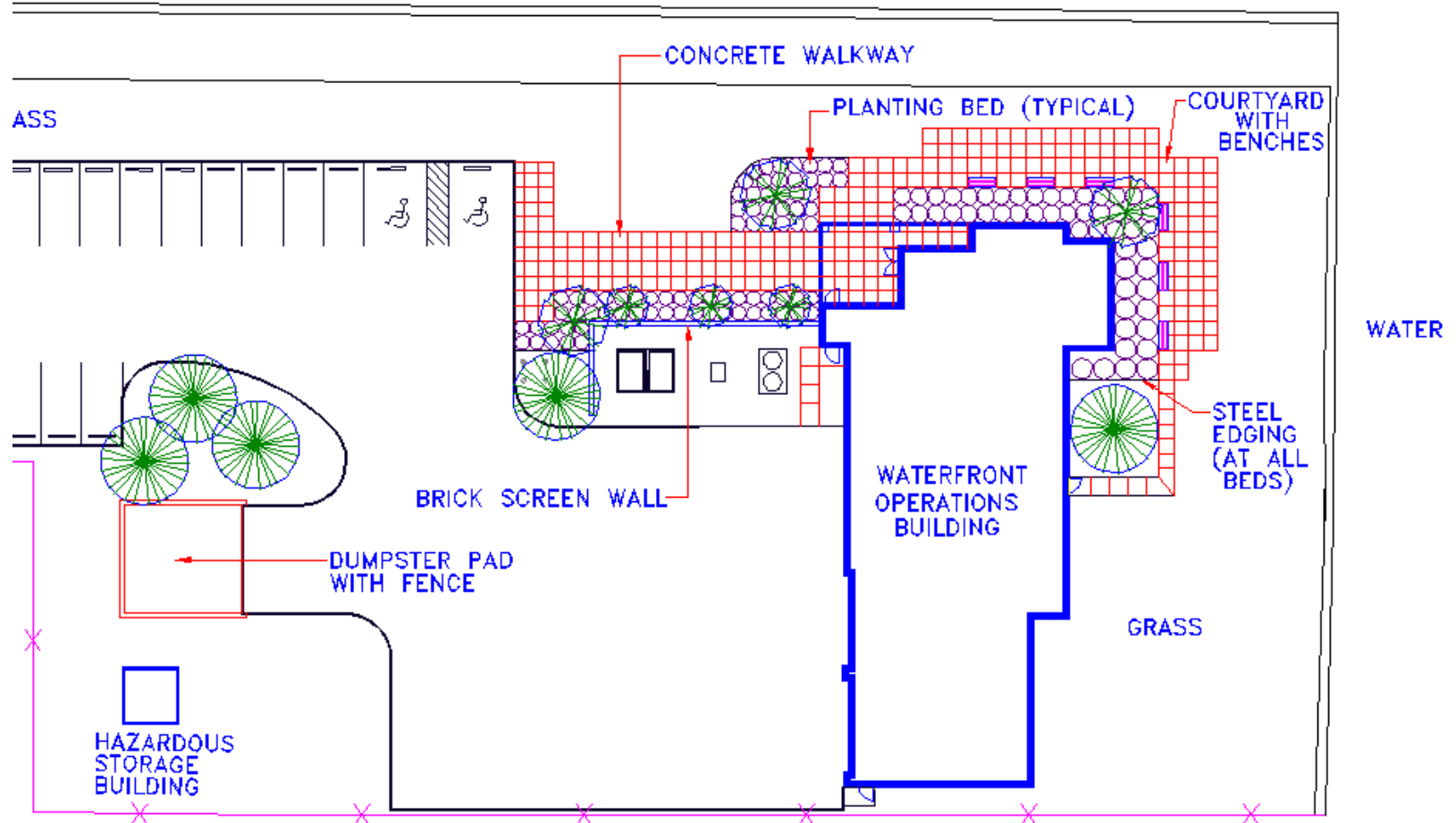


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# *Landscape Plan*



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**Naval Amphibious Base Little Creek, Norfolk, Virginia**

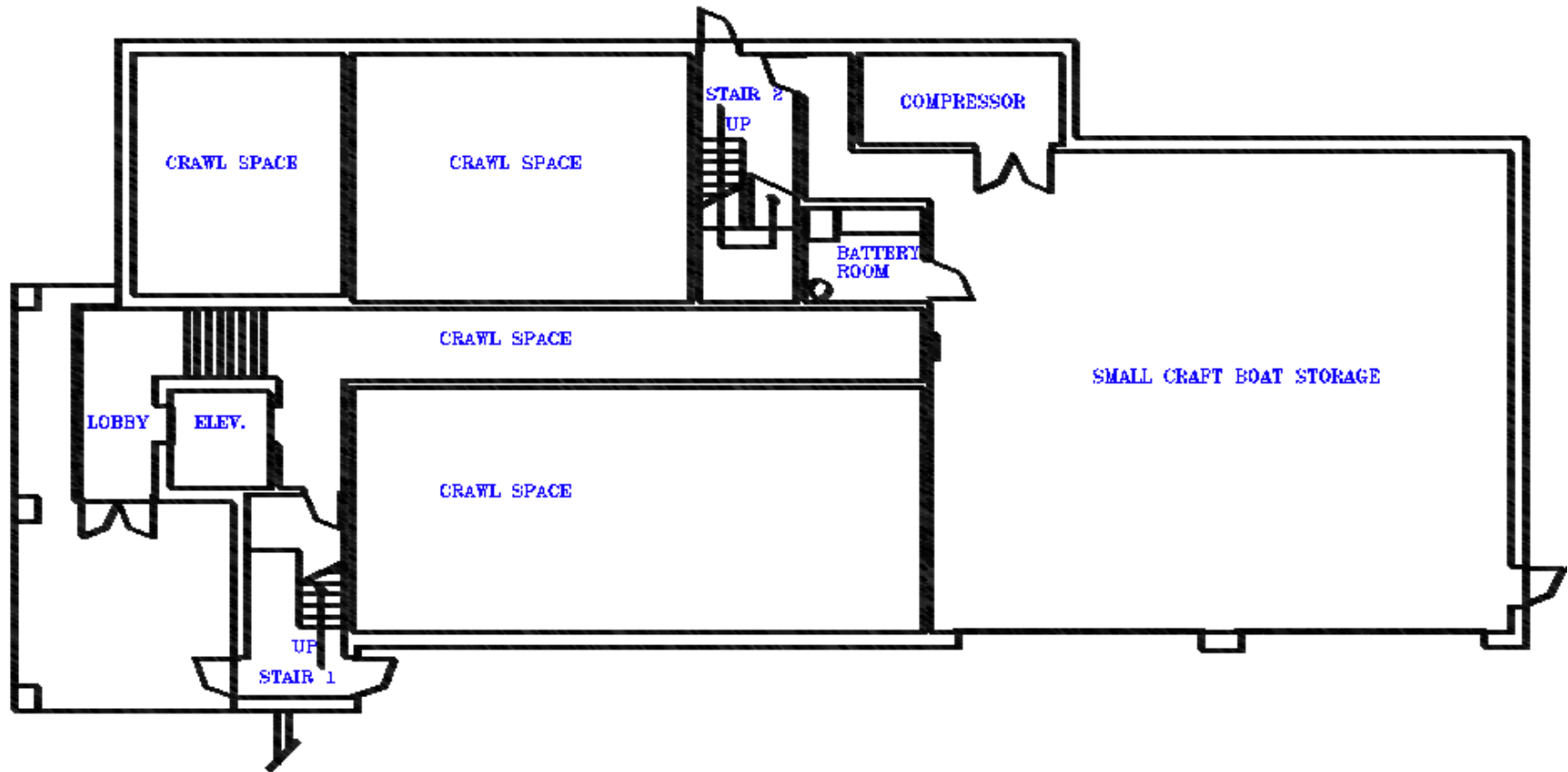
AT LANTDIV OUR MOTTO IS:  
“IF YOU CAN’T GROW HAIR, GROW A SHRUB”



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# *New Facility Ground Floor*



GROUND FLOOR PLAN

**Waterfront Operations Building**

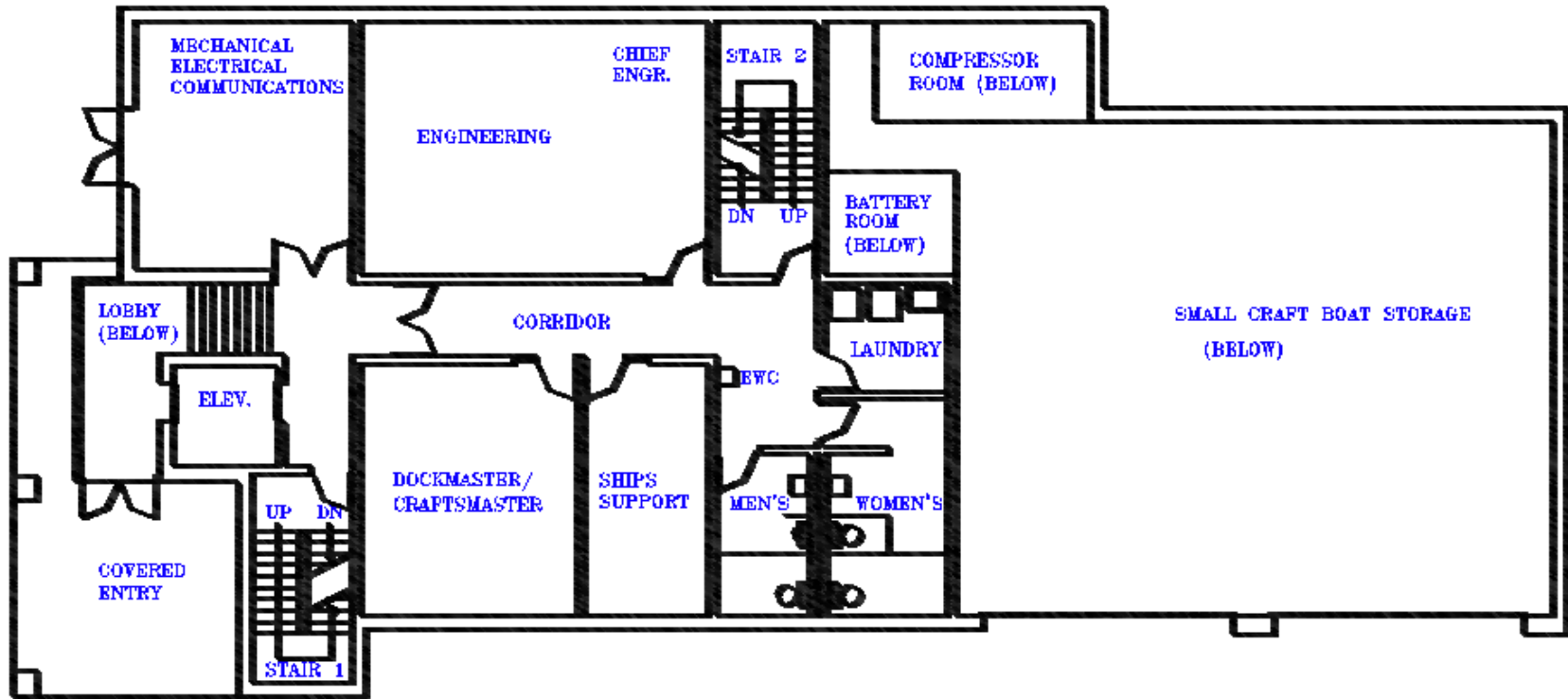
**Naval Amphibious Base Little Creek, Norfolk, Virginia**





# New Facility First Floor

## Plan

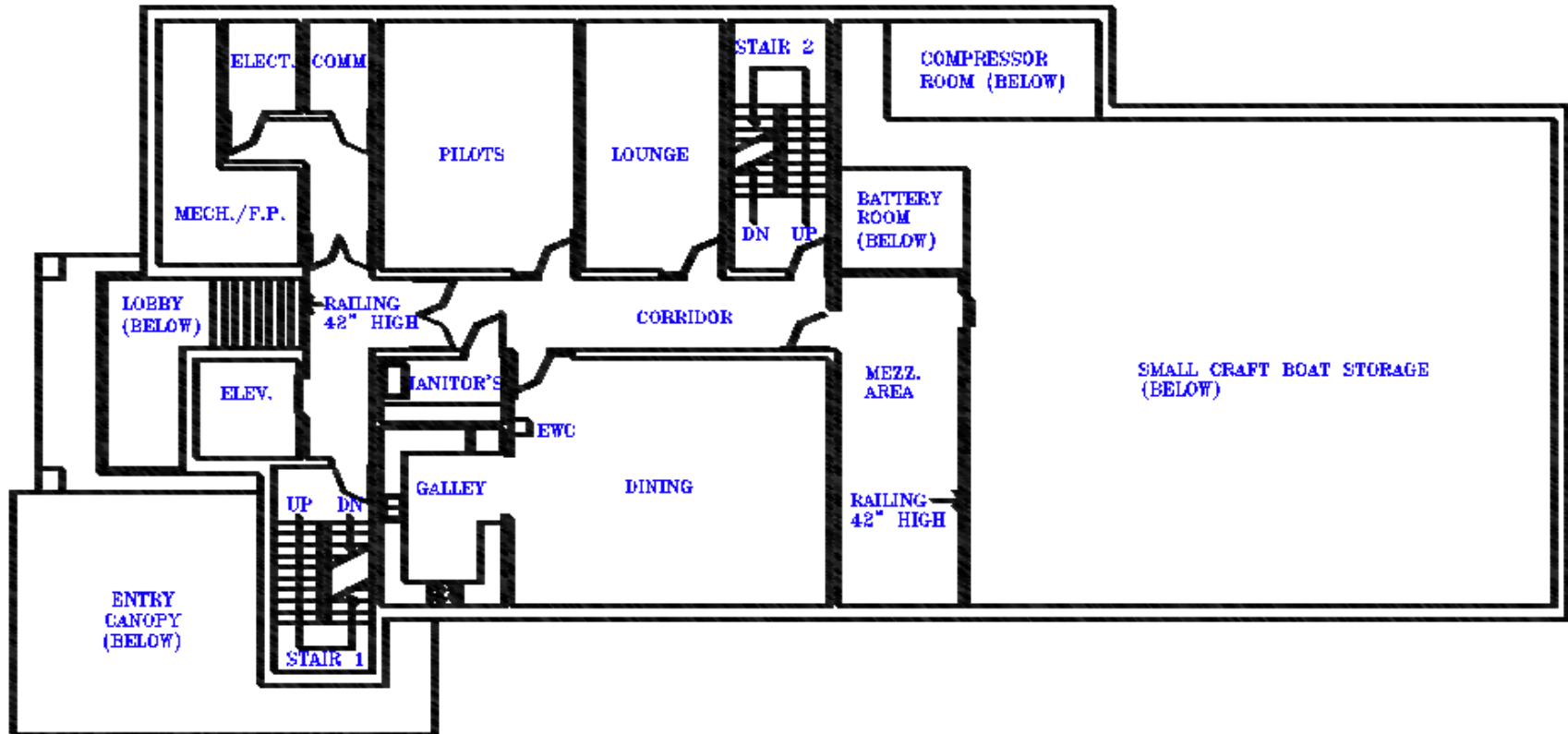


FIRST FLOOR PLAN

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**Naval Amphibious Base Little Creek, Norfolk, Virginia**



# New Facility Second Floor Plan



SECOND FLOOR PLAN

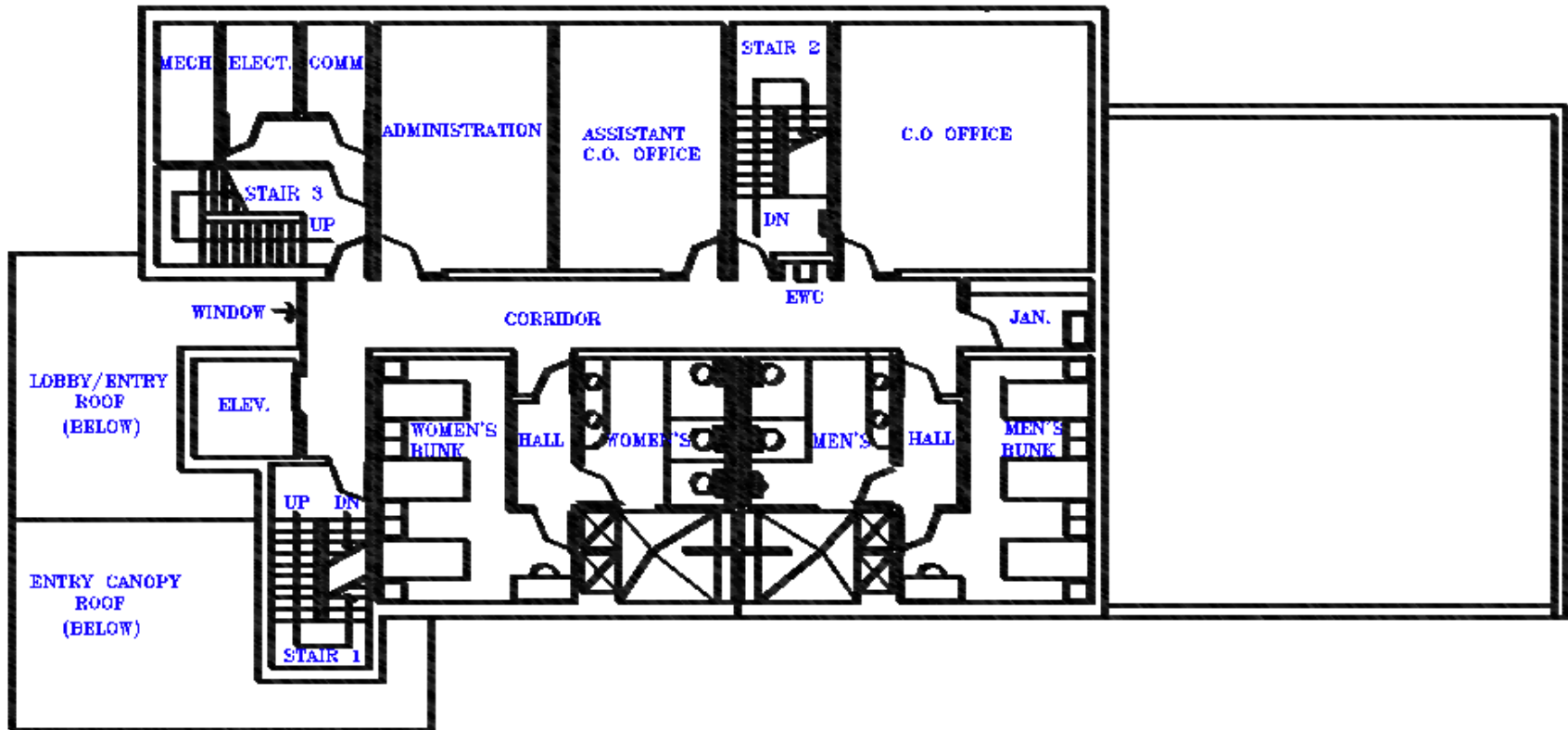
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# New Facility Third Floor

## Plan



THIRD FLOOR PLAN

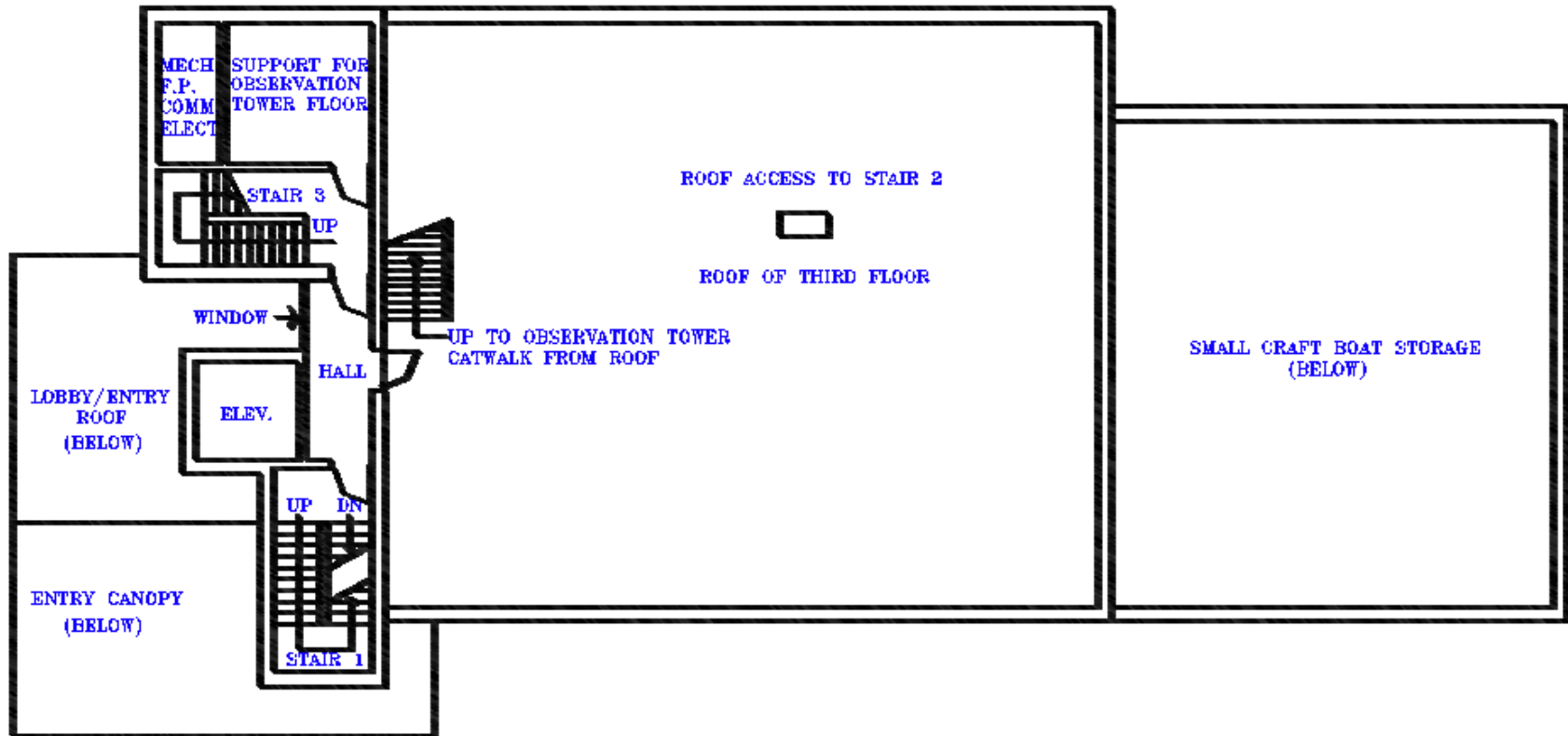
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# New Facility Forth Floor

## Plan



MAIN BUILDING ROOF FOURTH FLOOR PLAN

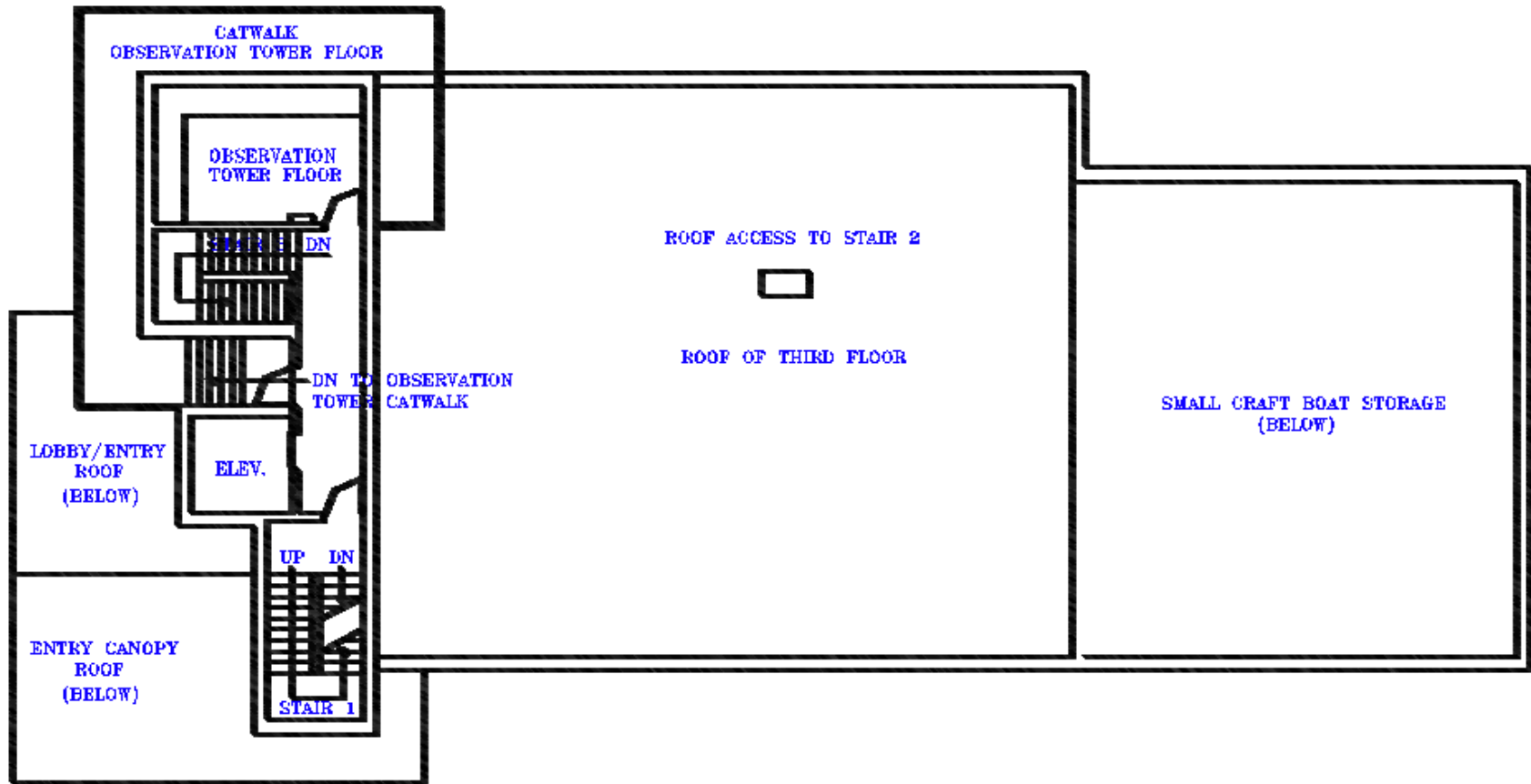
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# New Facility Tower Plan



OBSERVATION TOWER AND SUPPORT SPACE FIFTH FLOOR PLAN

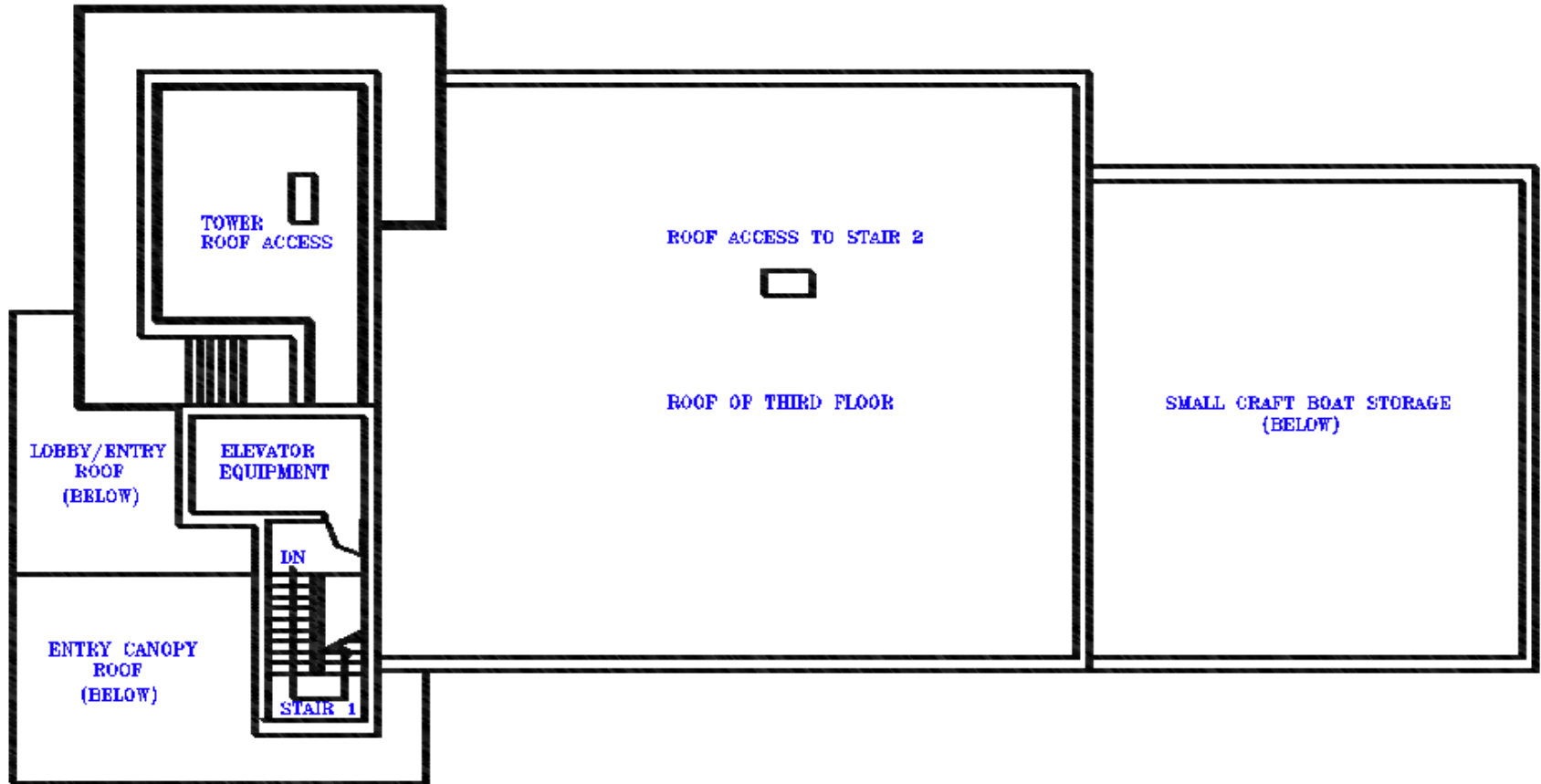
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# New Facility Penthouse

## Plan



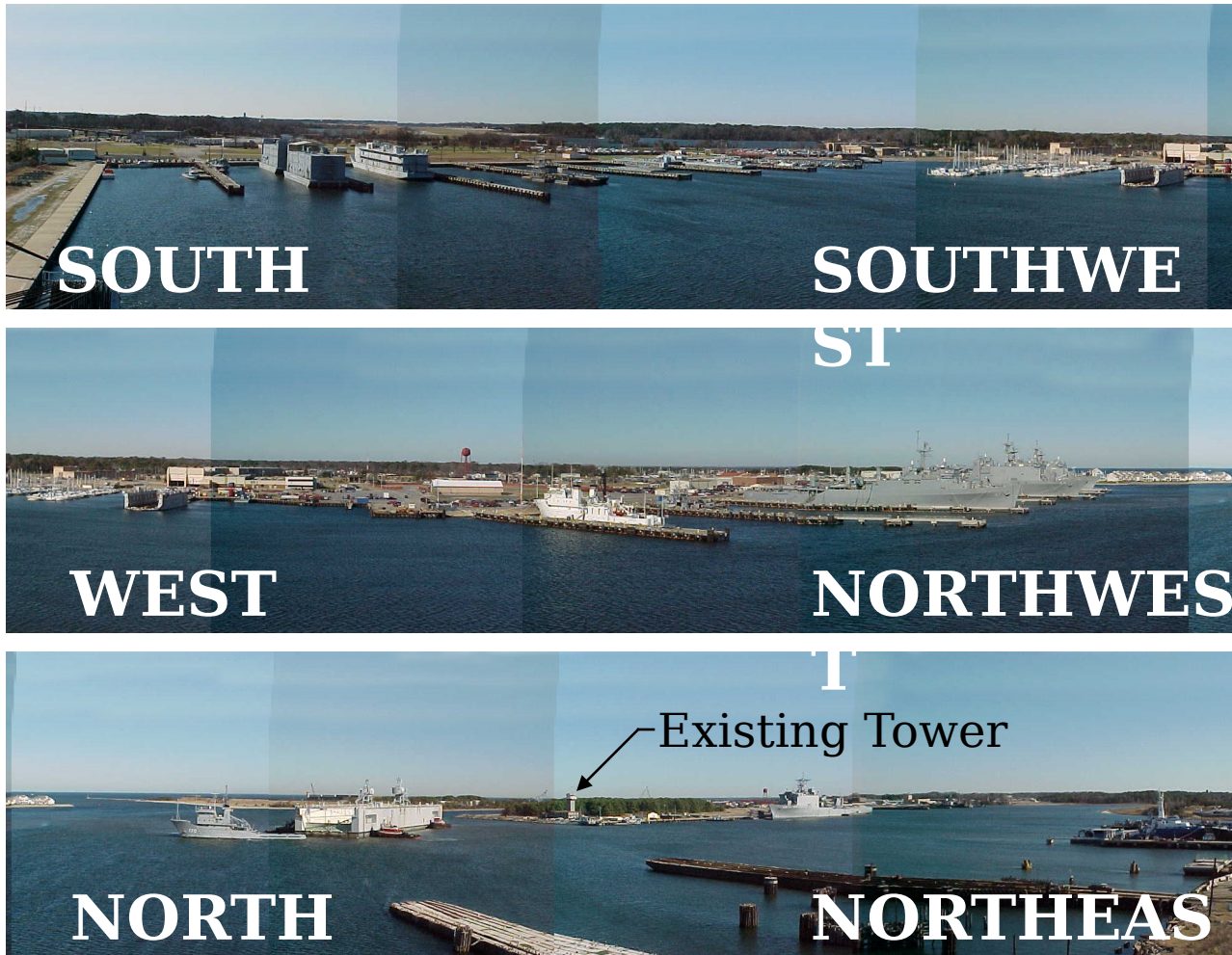
ELEVATOR EQUIPMENT PENTHOUSE SIXTH FLOOR

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# *New Site Panoramic View*

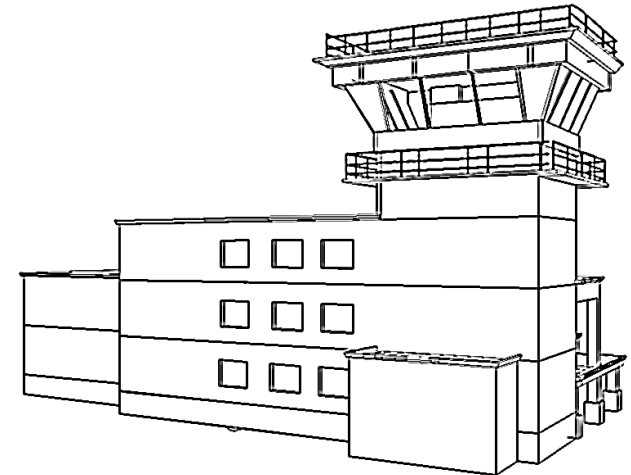
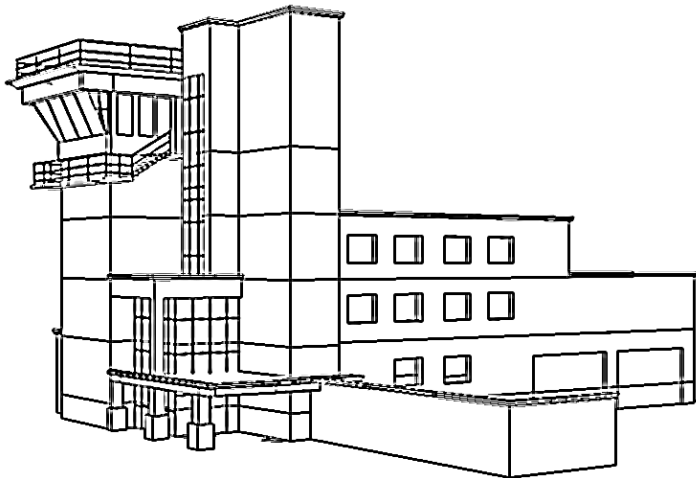
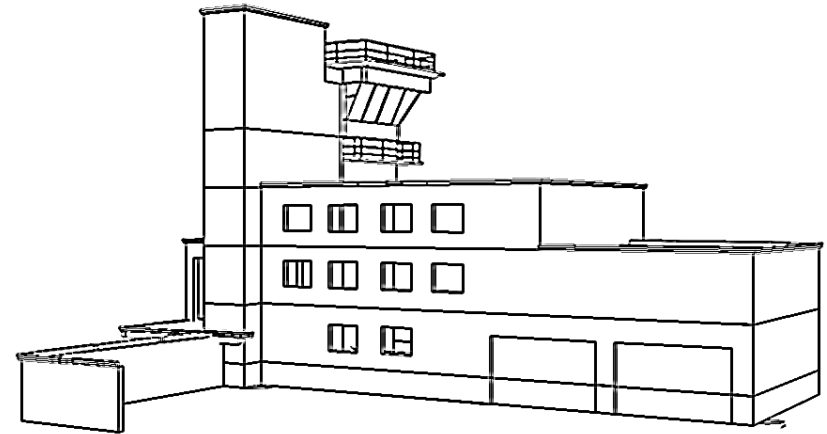
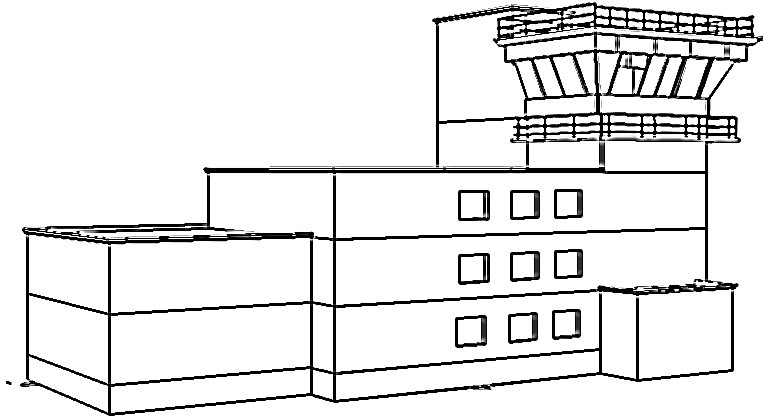


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# *New Facility Rendering*



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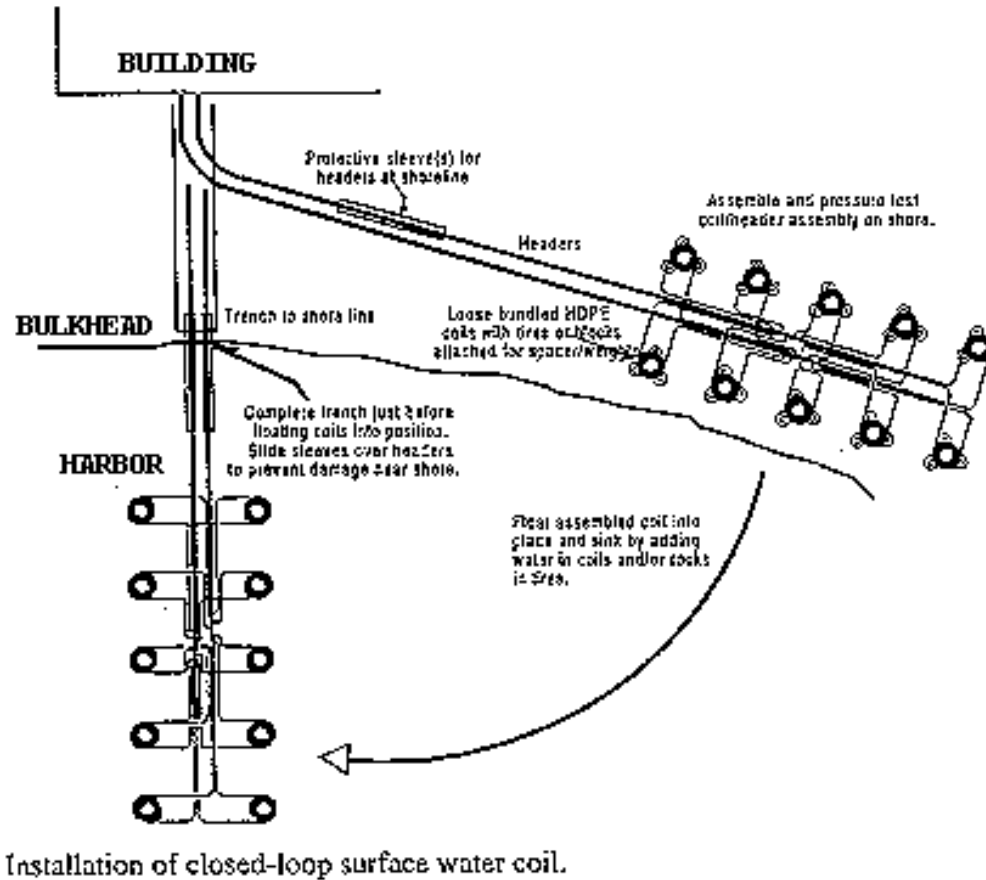
# *New Facility Mechanical*

## *Systems*

- **Option 1 - Series fan-powered variable air volume (FPVAV) terminals** with terminal hot water coils. Dx and hot water coil equipped variable air volume (VAV) air handler. Variable frequency drive fan modulation. Natural Gas fired hot water boiler. Air-cooled condensing unit. Natural Gas fired domestic hot water heater.
- **Option 2 - Ground Source Coupled Heat Pump units.** Central ventilation air handling unit with water to water heat pump. Electric domestic hot water heater.
- **Option 3 - California type water to air heat pump units. Closed circuit cooling tower.** Central ventilation air handling unit with water to water heat pump. Natural gas fired hot water boiler. Natural gas or electric domestic hot water heater.
- **Option 4 - Constant Volume Air Handling Units.** Multiple air handlers with chilled and hot water coils. Air cooled chiller. Natural Gas fired hot water boiler. Natural Gas fired hot water heater.

# Option 2 Mechanical System

## Ground Source Coupled Heat Pumps



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# Cost Estimate

	<b>CONCEPT #3</b>		
<b>PRIMARY FACILITY</b>	1371	<b>1,503,000</b>	
<b>DESIGN FEE 3% PRIMARY FACILITY COST</b>		<b>45,000</b>	
<b>SUPPORTING FACILITIES</b>	<b>LS</b>	<b>716,000</b>	
PILING	LS	140,000	
ELECTRICAL UTILITIES	LS	164,000	
MECHANICAL UTILITIES	LS	153,000	
ROADS, PARKING, SIDEWALKS	LS	119,000	
SITE IMPROVEMENTS	LS	40,000	
DEMOLITION	LS	100,000	
<b>OPTIONS/ADDITIVES</b>	LS	128000	
<b>TOTAL COST</b>		<b>\$ 2,264,000</b>	
<b>Base Bid Design To ECC:</b>	<b>\$2,180,000</b>		
<b>Opt./Add. Design To ECC:</b>	<b>\$ 220,000</b>		
<b>Total Target Award ECC:</b>	<b>\$2,400,000</b>		

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# Cost Estimate Summary

CONCEPT #1				CONCEPT #2				CONCEPT #3			
		Quantity	Cost		Quantity	Cost		Quantity	Cost		
PRIMARY FAC		1,386	1,541,000	PRIMARY FAC		1,245	1,392,000	PRIMARY FAC		1,371	1,503,000
DESIGN FEE			46,000	DESIGN FEE			42,000	DESIGN FEE			45,000
SUPPORT FACYS			741,000	SUPPORT FACYS			773,000	SUPPORT FACYS			716,000
TOTAL COST			\$ 2,328,000	TOTAL COST			\$2,207,000	TOTAL COST			\$ 2,264,000
Base Bid Design To ECC:			\$ 2,180,000								
Opt./Add. Design To ECC:			\$ 220,000								
Total Target Award ECC:			\$ 2,400,000								



# *LANTDIV Team*

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